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Swiss Map online
Manual

Software Version 2.4.0

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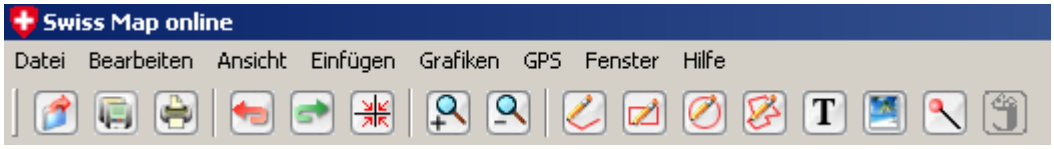
1 Symbols in the menu area

Open
Save as
Print
Redo
Undo
Centre on coordinates
Zoom in
Zoom out
Polyline
Rectangle
Ellipse
Polygon
Text
Insert bitmap
Waypoint
Delete

2 User surface

Swiss Map online is split into two areas – the visualization area and the menu area.

2.1 Menu area



The menu area is in the upper left corner of the user surface. The various menus provide access to all the functions of Swiss Map online.
The symbol bar provides direct access to the main functions.

2.2 Visualization area

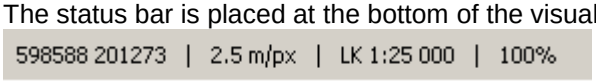
All maps, information and attributes are displayed in the visualization area.
Upon first start up of Swiss Map online, the following four registers are visualized:

Map: Here, the selected map data are visualized. The map can be moved, and overlays can be visualized or created.
Overview: An overview map of Switzerland as well as the currently visualized map cut-out are displayed.
Available layers: All the maps that Swiss Map online can display are listed.
Selected layers: All the currently active maps are listed. Their sequence, transparency and visibility can be adjusted here.

Other opened windows are added to the visualization area as registers. The dimensions and the position of the registers within the visualization area can be adjusted freely.

2.3 Status bar

The status bar is placed at the bottom of the visualization area.



The status bar gives the current position of the mouse pointer (CH1903), the map resolution, the current map scale, and the zooming factor of the current map scale.

3 Use of the maps

Swiss Map online allows moving across the entire surface of a given map scale, independently of the division into sheets typical of printed maps. Several functions are available to that purpose.

3.1 Moving the map

There are three ways to move the map:

- Press and hold down the left mouse button in the **map window** and move the mouse in the desired direction. To place the map at the desired position, release the mouse button.
- Press and hold down the left mouse button in the **map window** and move the mouse in the desired direction. Once close to one of the window edges, a red border appears. The map image keeps moving until the mouse button is released.
- Press and hold down the left mouse button in the **overview window** and move the map until the desired map cut-out coincides with the red rectangle.

3.2 Centring the map

There are several ways to centre the map:

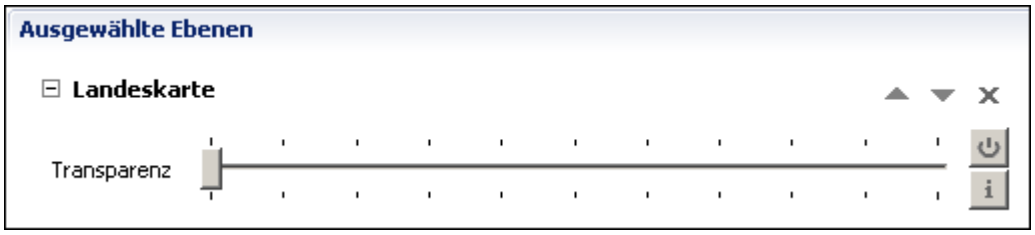
- **Right-click:** Click the right mouse button at the desired position in the map window and select *Centre map*.
- **Right-click on drawn items:** Click the right mouse button on a drawn item in the map window and select *Centre on shape*.
- **Coordinate input:** Access the coordinate input fields via the symbol bar or the menu and enter the coordinates in the appropriate format. Select *Show on map* to centre the map on the entered coordinates.
- **Name input**: Access the name input field via the symbol bar or the menu and enter the desired place name. *Search* displays a list of the retrieved place names. Select the desired place and click *Show on map* to centre the map on the selected place.

3.3 Zooming

The zoom function is accessed via the symbol bar, the menu *View*, the context menu (right-click) or the keyboard shortcut *Ctrl & + / Ctrl & -*.
The zoom function allows switching between the scales of layers that are available at more than one scale. Three additional zoom levels are available for zooming in, and one additional zoom level is available for zooming out.
For layers that are available at one scale only, the zoom function provides visualizations of the same image at different zoom levels.

3.4 Managing selected layers

In the register **Selected layers**, the selected layers can be managed and additional details to the single layers can be displayed.



Several layer properties may be modified.

These two arrows are used to set the sequence in which the layers are displayed.

Close the layer.

Temporarily hide the layer. Click again on the symbol to show the hidden layer.

Display information about the layer.

The transparency of the single layers can be adjusted by moving the slider.
The minus symbol preceding the layer name collapses the settings for the transparency as well as the buttons to display the information and to hide/show the layers, for an improved overview.

3.5 Searching for coordinates/names

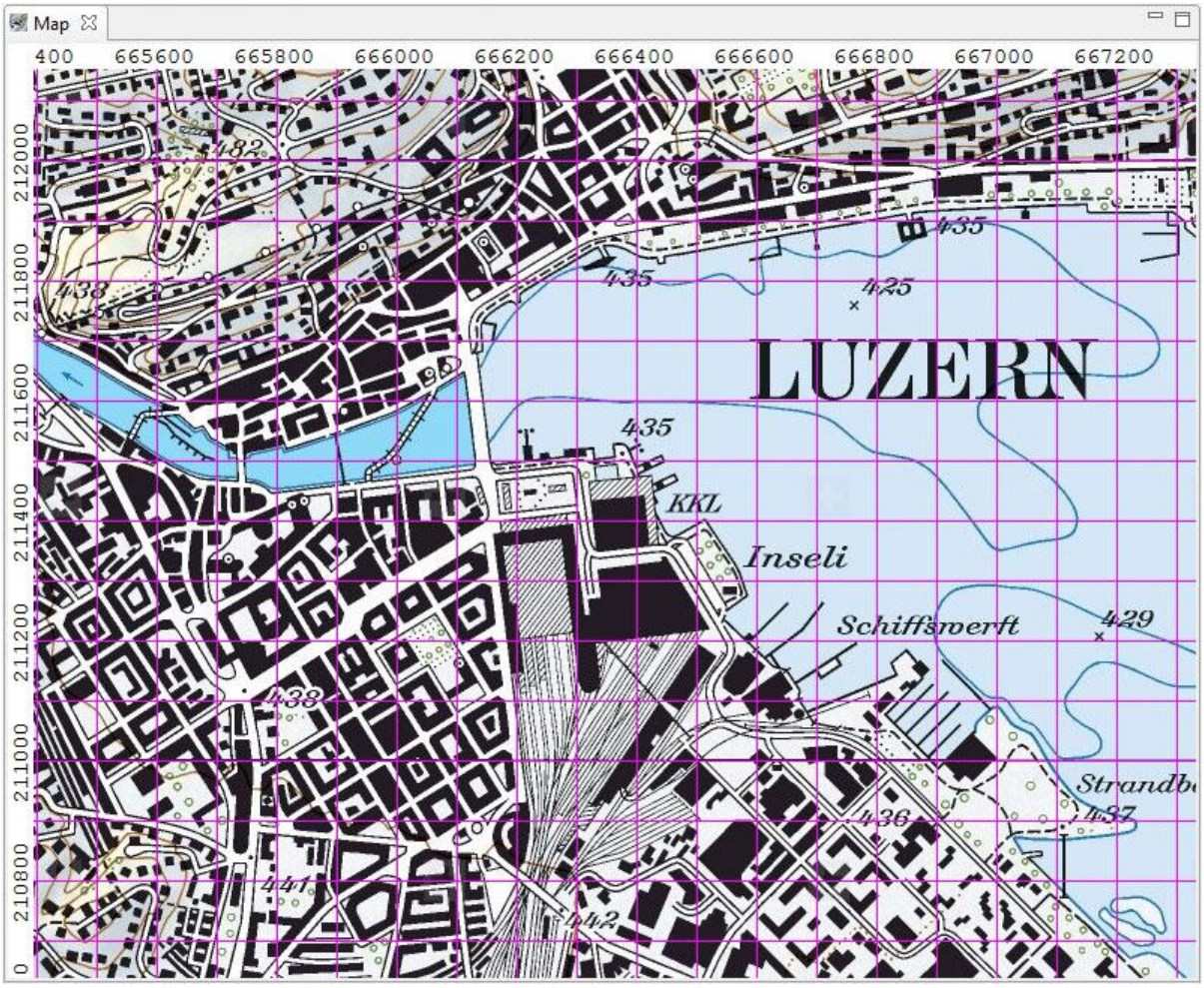
As already outlined in chapter 3.2, these functions are used to look for coordinates and place names to be displayed.
The coordinates may be entered in the formats CH1903 (E 600985 N 197455), CH1903+ (E 2600985 N 1197455) or WGS 84 (E 7.451585 N 46.928250).
Informations: http://www.swisstopo.ch/lv95

Additionally, in both windows the following buttons are available:

- **Insert waypoint:** The map is centred on the entered coordinates or on the selected place, and a waypoint is inserted at the corresponding location.
- **Mark map centre:** When active, a cross-hair is placed on the entered coordinates or on the selected place. The map can nevertheless be used normally.

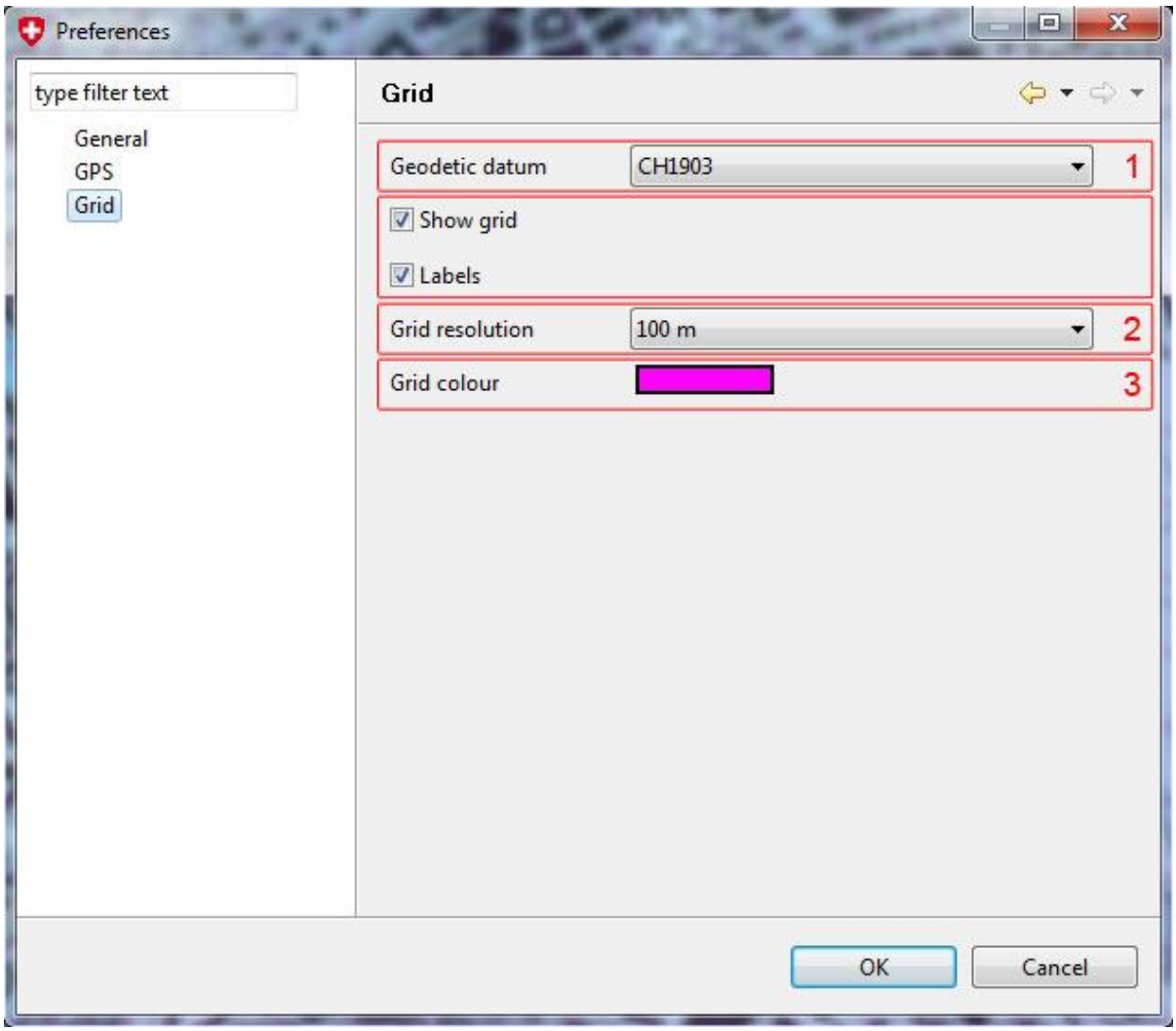
3.6 Coordinate grid/-labelling

Swiss Map online allows you to visualize a coordinate grid and its labelling.



You may show/hide the coordinate grid in three different ways:

- Menu *View → Coordinate grid* (grid lines) and *View → Labelling*
- In the window „Available layers“ via the list of layers: *Basis data → Coordinate grid*
- Menu *File → Settings… → Grid,* select *Show grid* and/or *Labelling.*
  Here you may additionally set the geodetic datum (1), the line spacing (2) and the line colour (3):



The coordinate grid is shown as a layer in the two windows „Available layers“ and „Selected layers“. Hence, it can be switched on/off, and its transparency may be adjusted as any other layer.

4 Graphic functions

With the available graphic tools of Swiss Map online you may complete the maps according to your personal needs. In addition to standard items such as line, rectangle, ellipse and polygon, you may insert text, images and waypoints.
To insert a waypoint, click on the button *Waypoint* in the symbol bar and place the waypoint by clicking on the map. From the properties window, which opens automatically, select the desired waypoint symbol.

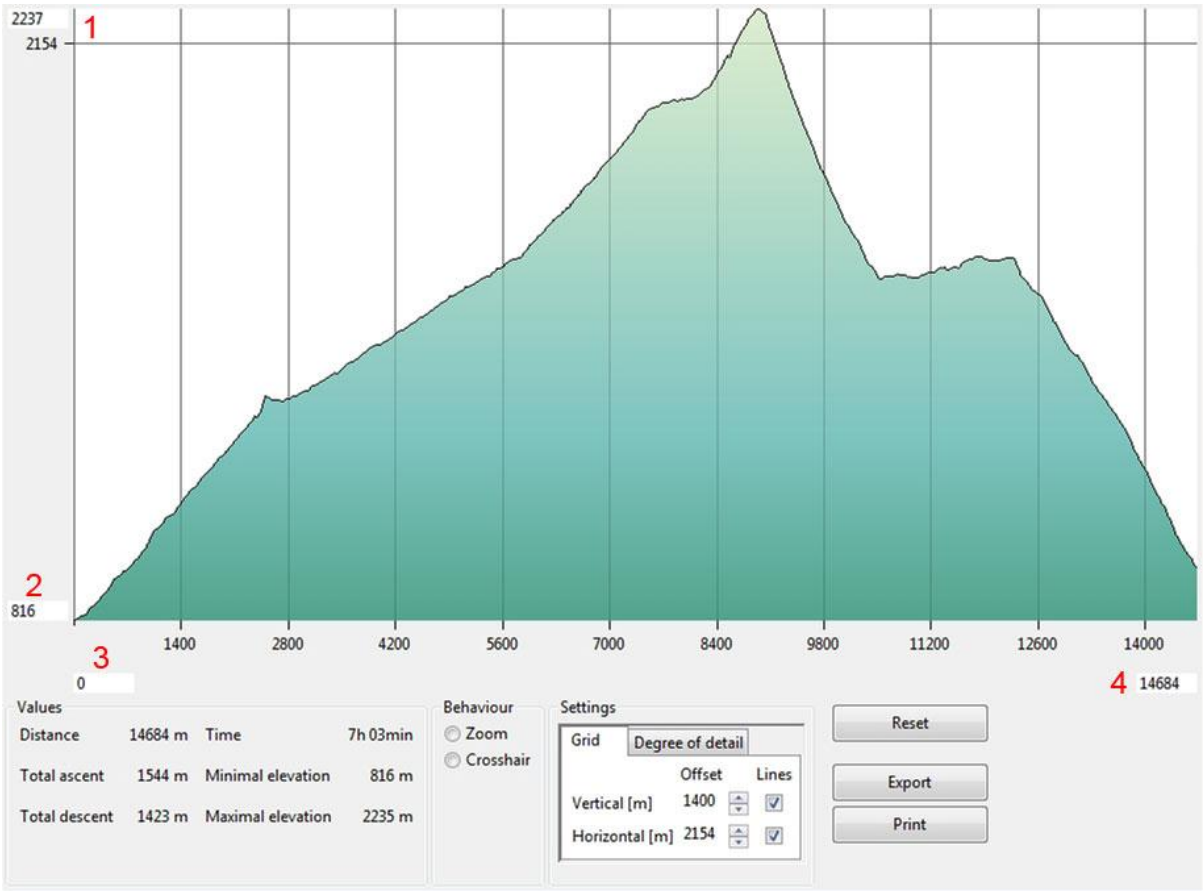
To draw a polyline in the map, proceed as follows:
1. Select the desired map scale and map cut-out
2. Select the tool by clicking on the button *Polyline* in the symbol bar
3. Set the first point of the polyline by clicking on the map
4. Set additional points by clicking on the map
5. Terminate the polyline by setting the last point with the right mouse button
6. The context menu lists the functions available for the item. Right-click on the graphic item to recall the context menu. In the case of a polyline, for example, you may access the profile function.

Whenever a graphic item is selected, a properties window opens (depending on the object, the window is labelled *Line* or *Area*). In this window, the properties of the selected graphic item may be modified (e.g. line style, thickness, colour). For each graphic item, you may adjust the transparency with the slider, enter a name (important in case you intend to transfer the object to a GPS receiver), and add a comment. Furthermore, you may assign to the graphic item an e-mail address, an URL or a link to a file.

To edit a graphic item, select it with a mouse click. The selected object is provided with handles. Click on a handle to drag the object to the desired position. Vertices may be added to or removed from polylines and polygons via the context menu.
To connect two polylines, select one polyline with a mouse click, press and hold down the Shift key on the keyboard and select the other polyline as well with a mouse click. Right-click on one of the lines and select *Merge lines* from the context menu.
To disconnect a polyline, right-click on the desired vertex and select *Split polyline* from the context menu.

All graphic items can be measured. Select *Measure* from the context menu of a selected object.

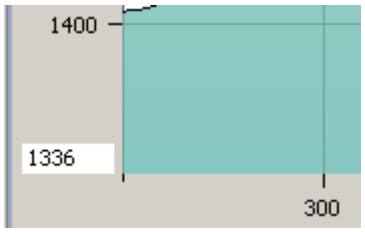
5 Profile functions



The profile window consists of two parts. In the upper part, the desired profile is displayed, along with a set of options for its visualization. In the lower part, there are details about the displayed profile, additional detailed setting options, and the available functions.

5.1 Profile view

The displayed profile immediately takes over the selected settings.
In the white fields on the left of and under the profile panel you may enter the minimum and maximum values for the axes (number 1 to 4).

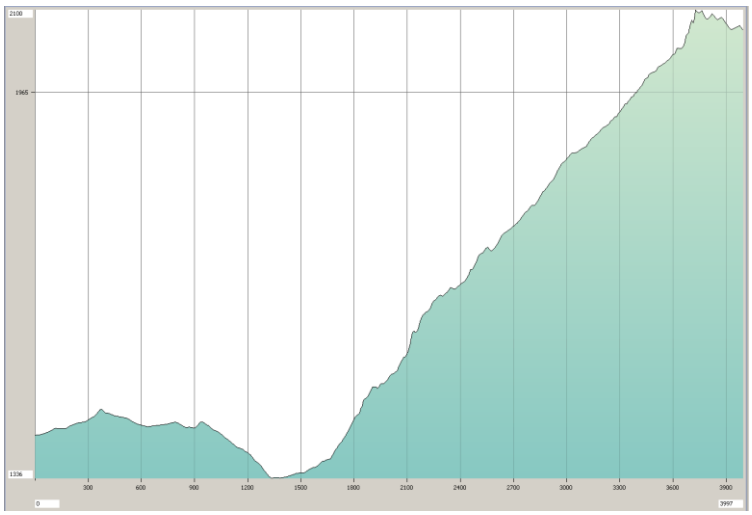


Example: The white field number 2 on the bottom left, with the value 1336.

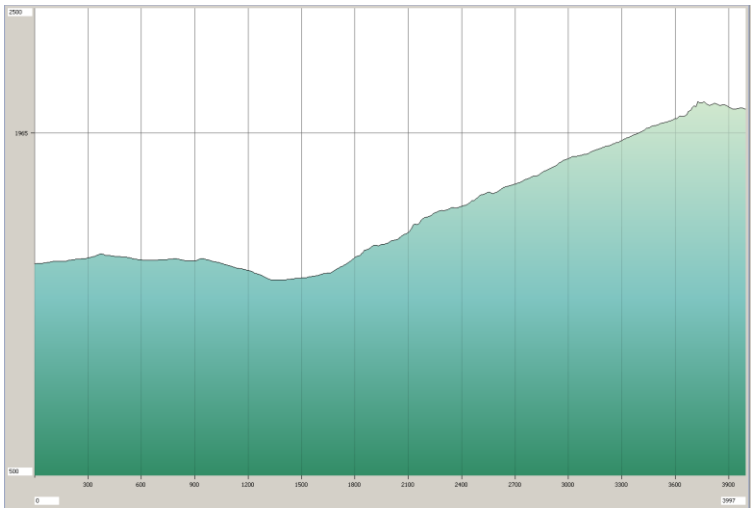
5.1.1 Minimum and maximum values

Via fields number 1 and 2, the values for the y-axis, the altitude in meters, vertically, are entered.
Via fields number 3 and 4, the values for the x-axis, the length in meters, horizontally, are entered.

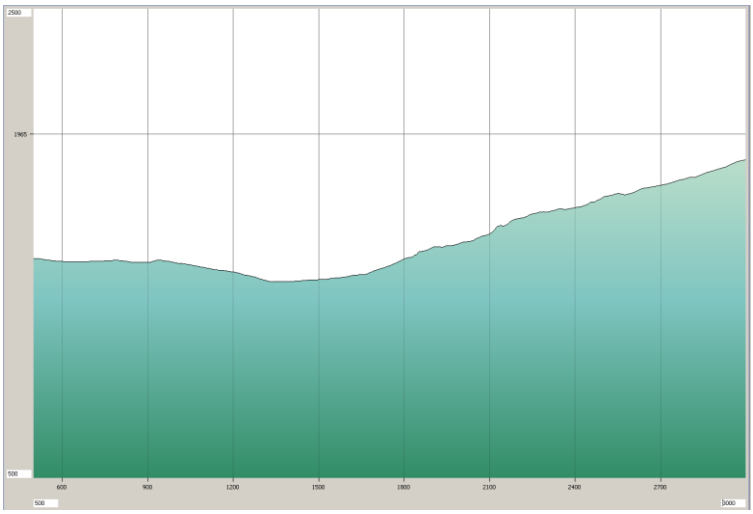
A modification of the y-axis can be compared to a superelevation, as used in several other programs.
A modification of the x-axis changes the displayed profile range.



Example 1: In this profile view, the axes values were left unchanged.
Field 1: 2100
Field 2: 1336
Field 3: 0
Field 4: 3997



Example 2: In this profile view, the values for the y-axis were modified.
Field 1: 2500
Field 2: 500
Field 3: 0
Field 4: 3997



Example 3: In this profile view, the values for both the x- and the y-axis were modified.
Feld 1: 2500
Feld 2: 500
Feld 3: 500
Feld 4: 3000

5.2 Detailed information and settings

The lower part of the window provides details about the displayed profile, as well as various setting options.

5.2.1 Values

Distance: Total length of the calculated profile
Total ascent: Cumulative elevation gain along the calculated profile
Total descent: Cumulative elevation loss along the calculated profile
Time: Hiking time calculated using the official formula of Swiss Hiking
Minimal elevation: The lowest point within the calculated profile
Maximal elevation: The highest point within the calculated profile

5.2.2 Behaviour

Zoom: The function Zoom allows to display a selected portion of the profile. After having activated the zoom by ticking the round box, use the left mouse button to draw a selection rectangle in the profile window and display the desired section. Hold the mouse button down while drawing the selection rectangle.
Crosshair: The function Crosshair activates a crosshair, which can be dragged along the horizontal axis in the profile window. If you visualize the map at the same time, the crosshair can be followed along the polyline.

5.2.3 Settings

Use Settings to edit the displayed grid lines. Offset allows to adjust the between-lines spacing, whereby vertical and horizontal lines can be adjusted independently of each other. Lines shows or hides the grid lines. The upper bar „Degree of detail“ visualizes the profile with more or less detail.

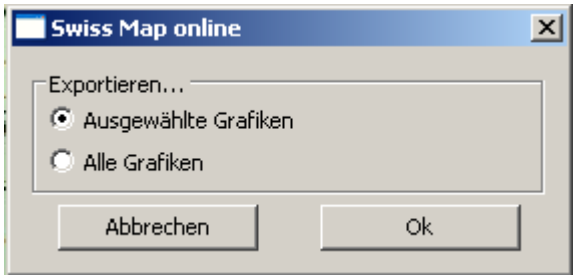
5.2.4 Buttons

Reset: The profile view is reset to the initial position (grid, degree of detail and crosshair are retained)
Export: Allows to export the profile as an image
Print: Opens the print dialogue

6 Saving/Export/Import

6.1 Save overlay

Overlays are saved in *.xol* format. An overlay is a graphic layer, similar to a transparent sheet laid over the map to keep record of the own added items.
Overlays are saved via the *Save as…* button or the menu. All of the items created using the graphic functions can be saved in an overlay.
The following dialogue appears when saving one or more selected graphic items.



- **Selected graphics:** Only the currently selected graphics are saved in the overlay. Other drawn graphics are not saved.
- **All graphics:** All drawn graphics are saved, regardless of whether they are selected or not.

Both functions are independent of the currently visualized map image and also save graphics that lie beyond the currently visualized map cut-out.
Upon choosing an option, you may set a destination to save the overlay and proceed with saving as usual.

If none of the graphics are selected, all graphics are automatically saved.

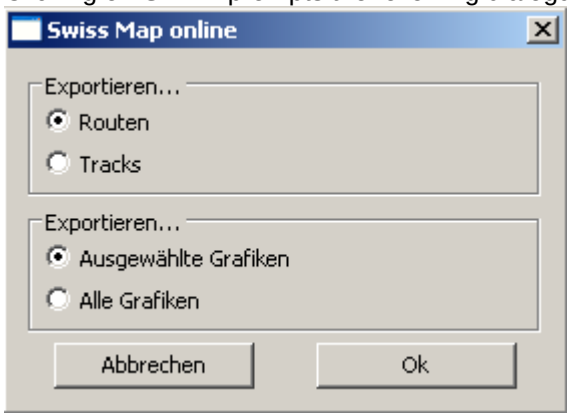
6.2 Open overlay

To open a saved overlay, use the button *Open…*, the menu *File → Open...* or the shortcut *Ctrl & O*.
The command allows opening *.xol* files only.

6.3 Export GPX

The function to save a *.gpx* file is accessed via the menu *File → Export → GPX…*
This function is active provided that one or more of the selected graphics can be saved in *.gpx* format. Polylines and waypoints can be saved as *.gpx* files. They can also be saved together in the same *.gpx* file.

Clicking on *GPX...* prompts the following dialogue:



- **Routes/Tracks:** Here you may determine whether the polylines are saved as routes or as tracks
- **Selected graphics:** Only the currently selected graphics are saved. All other drawn graphics are not saved.
- **All graphics:** All graphics that can be saved as a *.gpx* file are saved.

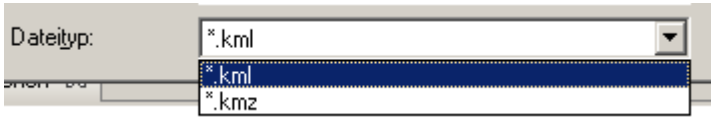
Upon choosing an option, you may set a saving destination and proceed with saving as usual.

6.4 Export map

The map can be saved as a JPEG image via the menu *File → Export map…*
The saved image corresponds exactly to the currently visible map cut-out.
All layers and available graphics are saved.
Upon clicking on *Export map...*, you may designate a saving destination and proceed to save the image.

6.5 Import GPX/KML/KMZ

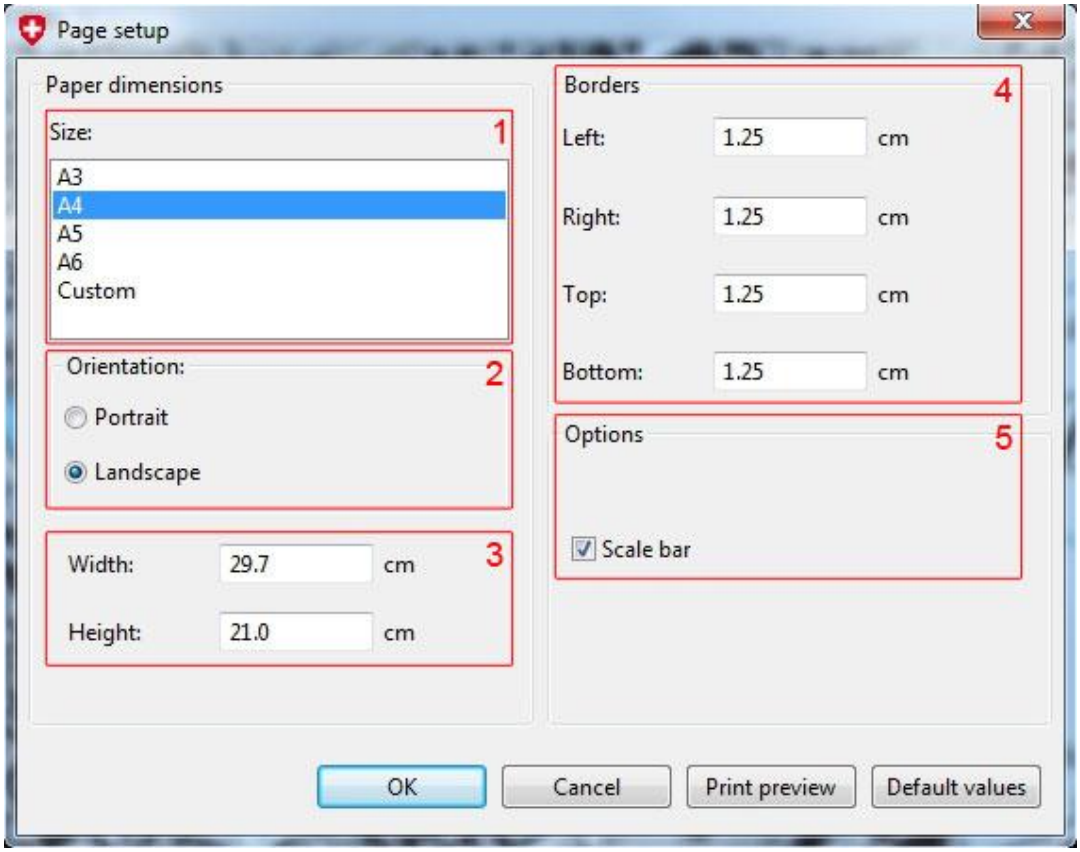
Swiss Map online imports files in the formats GPX, KML and KMZ. To launch the import, select the desired sub-category from the menu *File → Import*.
Clicking on the desired format prompts a dialogue, which allows to select and open the file.
In case you chose KML/KMZ, please make sure that you select the correct ending from the field file type in order for the files to be visualized.



7 Printing

7.1 Page setup

Swiss Map online allows you to print the current map image according to your needs. The document properties can be set under *File → Page setup*.

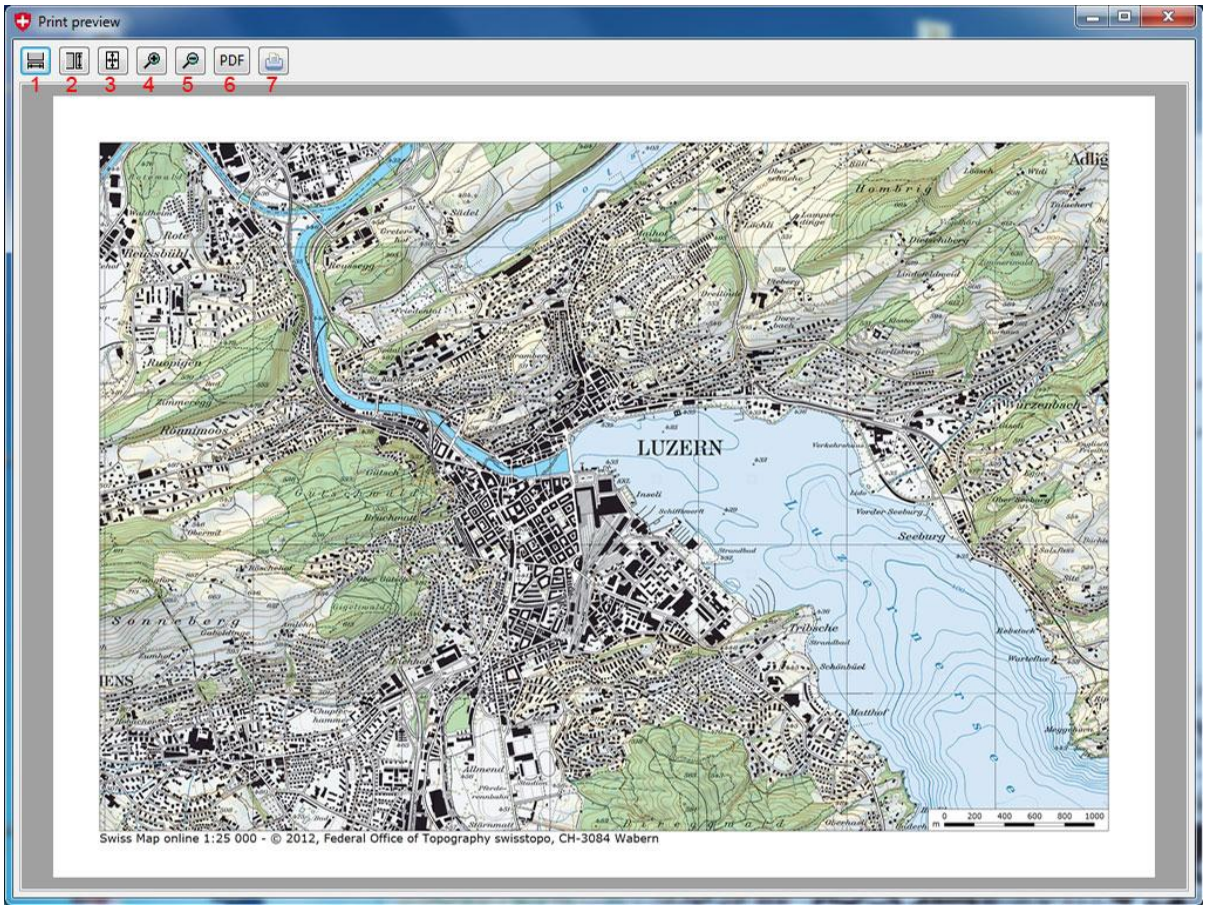


1. Size: Select the desired page size. The size given here may deviate from the size set in the standard printer driver. Should the size given here (e.g. A3) exceed the size set in the printer driver (e.g. A4), the (smaller) size set in the printer driver determines the effectively printable area.
2. Orientation: Enable either portrait or landscape orientation.
3. Here the currently set page dimensions are given. You may adjust the values to your needs. The maximal values that can be entered correspond to the sides of an A3 sheet.
4. Borders: Enter the desired margin width for the map section to be printed. Note that normal office printers usually have an irreducible unprintable area. If you set the margin to zero regardless, the physical requirements of the printer will override your settings.
5. Here you may choose to add a scale bar to the printed map.

Save your settings and close the print dialogue with *OK*, leave the dialogue without saving the changes with *Cancel*, preview the printed map with *Print preview*, or retrieve the default setting values with *Default values*.

7.2 Print preview

You may check the preview of the map section to be printed prior to sending the print job.



The buttons allow to adjust the display of the print preview:

1. Adjusts the display of the page to be printed to the width of the window.
2. Adjusts the display of the page to be printed to the height of the window.
3. Adjusts the display to the size of the window so that the entire page to be printed fits.
4. Enlarges the display.
5. Reduces the display.
6. Export here the map section as a PDF.
7. Confirms the print job.

7.3 Print area

To print a precisely defined map section, select *File* → *Print area* → *Set print area*. Alternatively, you may directly mark the desired portion by drawing a selection rectangle with the mouse while simultaneously holding down the SHIFT and CTRL keys on the keyboard. A yellow rectangle shows the selected print area. The rectangle can be resized by dragging its vertices. The rectangle can be enlarged beyond the current map section. In this way, a maximum of 10 million pixels can be selected. Zooming is not any longer possible, however, the map can still be moved and the layers shown or hidden.
IMPORTANT: as soon as the selected print area exceeds the printable page area, part of the image will be cut off. Change the page orientation (portrait/landscape) or reduce the print area.

Right-click on the map and select → *Clear print area* to remove the print area.

If no print area is defined, the size of the map section to be printed is adjusted to fit the page size.

8 GPS-functions

Swiss Map online makes a distinction between online and offline GPS transmission. In the online mode, position data are directly transferred from the GPS receiver and visualized in Swiss Map online. In the offline mode, waypoints, routes or tracks stored in the GPS receiver are transferred a posteriori to Swiss Map online. The transmission of waypoints and routes created in Swiss Map online to a GPS receiver also occurs via the offline interface.
The NMEA-0183 (NMEA 2.0)-compatible online interface, in combination with the use of any receiver compatible with the transmission protocol, allows pointing your position directly on the map, as well as visualizing and saving your route.

8.1 Connection

In order to use a GPS receiver with Swiss Map online, the GPS receiver needs to be connected to the computer via a USB or a serial interface. Swiss Map online recognizes the connected device automatically.
Please consult the user manual of the GPS device to select the appropriate interface and configure the required device settings.

8.2 Settings

The settings for the GPS receiver are found in the menu under *File → Settings… → Tab GPS*.
Swiss Map online automatically accesses your GPS receiver with a standard configuration. Usually, the settings do not need to be modified. Please consult the user manual of your GPS receiver for any deviations from the standard settings.

8.2.1 Connection troubles

In case Swiss Map online does not recognize the GPS device, follow these instructions.

For GPS devices connected via USB interface (e.g. Garmin Oregon 450t):

- Open the device settings (see 7.2 Settings)
- If the GPS device does not show, click on „Connection” and select **Garmin Mass Storage**
- Select „Apply“
- Should the GPS device still fail to show, check whether the device is correctly connected.

For GPS devices connected via serial interface (e.g. Garmin etrex summit):

- Open the device settings (see 7.2 Settings)
- If the GPS device does not show, click on „Connection” and select the COM interface to which the GPS device is connected.
- Select „Apply“
- Should the GPS device still fail to show, check whether the device is correctly connected.

8.3 Up-/Download

Routes, tracks and waypoints can be transferred directly from Swiss Map online to your GPS receiver and vice versa.
To import data from the GPS receiver into Swiss Map online, select from the menu *GPS → Download* the appropriate option. From the opening window, select which of the files stored on the GPS device shall be imported.
All imported data may be edited in Swiss Map online and saved in the preferred format (see chapter 5).

To transfer data from Swiss Map online to the GPS receiver, select from the menu *GPS → Upload* the appropriate option. The options are active provided that a graphic of the corresponding type is selected. Swiss Map online automatically opens the window to store the data on the GPS receiver at the correct location. You only need to name the file.

8.4 Online mode

Please consult the user manual of your GPS device for settings and compatibility with the online mode.
All the functions available in the online mode are listed in the menu *GPS*.

- **Tracking:** The map moves along with the position returned by the GPS receiver, and a polyline describing the route is traced.
- **Position symbol:** A symbol for the current position is displayed on the map.
- **Tracing:** A polyline describing the route is drawn, but the map does not move along.
- **Live mode:** The map moves along with the current position, but no route is drawn.
- **Insert waypoint:** A waypoint is inserted at the current position given by the GPS receiver.

8.4.1 Connection examples

Garmin GPS devices with serial interface (e.g. Garmin GPS45):

- Connect the GPS device to the computer
- Set the GPS device to „NMEA" output
- Access the GPS device settings (see 7.2 Settings)
- Under „Online connection", set the correct COM interface and „NMEA"
- Click on „Apply"

For Garmin GPS devices with USB interface (e.g. Garmin Oregon 450t), set the GPS interface to „Garmin Spanner".

9 Keyboard functions

9.1 Shift key

In Swiss Map online, the Shift key is used for various tasks. Pressing the left mouse button while the Shift key is being held down changes the behaviour depending on the action. Please note that the Shift key needs to be held down until the action is terminated.

- **Map window:** A selection rectangle can be drawn to activate and edit multiple graphics simultaneously.
- **Selection of single graphics:** Hold down the Shift key while clicking to select multiple graphics.
- **Graphic vertices:** When grabbing the vertices of a graphic to resize the item, the original aspect ratio is preserved.
- **Vertices of polylines and polygons:** When creating or modifying the vertices of polylines and polygons, the angle of the lines is constrained to fixed 15° intervals.

9.2 Keyboard shortcuts

Shortcut keys provide a faster method of navigating the program. Currently, Swiss Map online supports the following keyboard shortcuts:

Ctrl & O Open overlay
Ctrl & Q Quit Swiss Map online
Ctrl & Z Undo the most recent action
Ctrl & Y Redo the most recent action that was undone
Ctrl & + Zoom + / Switch to the next larger map scale
Ctrl & - Zoom - / Switch to the next smaller map scale
Ctrl & P Print the map
Delete Delete the selected objects

10 Menu reference

10.1 File

Menu item	Function
Open…	Opens .xol files
Save as…	Saves .xol files
Import	Imports .gpx, .kml and .kmz files
Export map…	Exports a .jpg image
Export	Exports .gpx files
Page setup…	Opens the page settings dialogue to configure the printing
Print preview…	Opens the print preview
Print	Opens the print dialogue
Print area…	Allows setting/clearing the print area
Preferences…	Opens the preferences for language, proxy and GPS
Exit	Quits Swiss Map online

10.2 Edit

Menu item	Function
Undo	Undoes the most recent action
Redo	Redoes the most recent action that was undone
Cut	Cuts out text
Copy	Copies text
Paste	Inserts cut or copied text
Centre on	Opens the coordinate input window or centres the map on the current GPS position

10.3 View

Menu item	Function
Zoom in	Zoom + / Switch to the next larger map scale
Zoom out	Zoom - / Switch to the next smaller map scale
Coordinate grid	Shows/hides the coordinate grid
Labelling	Shows/hides the labelling of the coordinate grid

10.4 Insert

Menu item	Function
Polyline	Upon clicking on the map, inserts a polyline
Rectangle	Upon clicking on the map, inserts a rectangle
Ellipse	Upon clicking on the map, inserts an ellipse
Polygon	Upon clicking on the map, inserts a polygon
Text	Upon clicking on the map, inserts a text field
Bitmap	Opens the dialogue to insert a bitmap/image into the map
Waypoint	Upon clicking on the map, inserts a waypoint

10.5 Graphics

Menu item	Function
Duplicate	Creates a copy of the selected graphic at the same location
Delete	Deletes selected graphics
Select all	Selects all graphics independently of the map cut-out
Clear	Deletes all graphics independently of the map cut-out
Merge	Combines two or more polygons into one
Remove node	Removes the selected vertex
Merge lines	Combines two or more polylines into one
Decompose	Splits merged polygons
Split polyline	Disconnects the polyline at the selected vertex
Reverse direction	Reverses the direction of a polyline (for arrow and profile)
Simplify	Simplifies a selected polyline by removing vertices
Turn into	Transforms a selected polyline into a polygon or splits a polygon at a selected vertex to transform it into a polyline
Order	Sets the sequence of one or more selected graphics relative to other graphics (e.g. a graphic shall partly be hidden by another)

10.6 GPS

Menu item	Function
Insert waypoint	A waypoint is inserted at the current position returned by the GPS receiver
Tracking	The map moves along with the position returned by the GPS receiver and the route is traced with a polyline
Position symbol	A symbol for the current position is displayed on the map
Tracing	The route is traced with a polyline, but the map does not move along
Live mode	The map moves along with the current position, but no route is drawn
Download	Transfers waypoints, routes or tracks from the GPS receiver into Swiss Map online
Upload	Transfers waypoints, routes or tracks from Swiss Map online to the GPS receiver

10.7 Window

Menu item	Function
Map	Opens the map window
Overview	Opens the overview map
Available layers	Opens the list of available layers
Selected layers	Opens the list of currently visualized layers
Name search	Opens the search for place names
Coordinates	Opens the coordinate input
Line settings	Opens the settings for line graphics
Area settings	Opens the settings for area graphics
Bitmap settings	Opens the settings for inserted images
Text settings	Opens the settings for text fields
Waypoint settings	Opens the settings for waypoints

10.8 Help

Menu item	Function
Tutorials	Opens the list of currently available video tutorials
Update…	Looks for program updates
Version	Shows the version number of the currently installed Swiss Map online
Product key…	Opens the input field for the product key
About Swiss Map online	Opens the window with information and contact details

10.9 Functions in context menus

Menu item	Function
Centre on shape / Centre map	Available in all context menus in the map window; centres the map on the selected graphic or on the point clicked
Measure…	Available for all selected graphics; shows details to the selected graphics
Show profile	Available for polylines; calculates the profile of the selected polyline